

IN THE CLAIMS

1. (Currently amended) A modified male non-human animal or avian species exhibiting reduced levels of a Bcl-w protein ~~and/or protein associated with Bcl-w~~ or a derivative or homologue thereof, wherein said Bcl-w protein comprises an amino acid sequence set forth in SEQ ID NO: 4 or is an amino acid sequence having at least about 47% similarity thereto and wherein said male non-human animal or avian species has an incapacity or a reduced capacity when compared to wild type male non-human animal or avian species to induce or facilitate undergo spermatogenesis.

2. (Cancelled)

3. (Currently amended) A modified male non-human animal or avian species according to claim 2 1 wherein the Bcl-w protein is encoded by a nucleotide sequence ~~substantially~~ as set forth in ~~SEQ ID NO: 1 or~~ SEQ ID NO: 3, ~~or is a nucleotide sequence having at least about 47% similarity identity thereto, or is a nucleotide sequence capable of hybridizing that hybridizes to~~ SEQ ID NO: 1 ~~or~~ SEQ ID NO: 3 under low stringency conditions of 42°C.

4-8. (Cancelled)

9. (Currently amended) A modified male non-human animal or avian species according to any one of claims 1 ~~to 5~~ and 3 wherein the modified animal comprises a deletion in the *bcl-w* gene.

10-11. (Cancelled)

12. (Currently amended) A genetically modified male non-human animal comprising a mutation in one or more alleles of a gene ~~comprising which comprises~~ a sequence of nucleotides ~~substantially~~ as set forth in ~~SEQ ID NO: 1 or~~ SEQ ID NO: 3, ~~or a nucleotide sequence having at least about 47% similarity identity thereto, and/or a sequence which is capable of hybridizing~~

hybridizes to SEQ ID NO: 1 or SEQ ID NO: 3 under low stringency conditions at 42°C, wherein said male non-human animal or avian species has an incapacity or a reduced capacity when compared to wild type male non-human animal or avian species to undergo spermatogenesis.

13. (Currently amended) A genetically male non-human modified animal according to claim 12 comprising a mutation in both alleles of the gene.

14. (Currently amended) A method of producing a genetically modified male non-human animal substantially incapable of producing Bcl-w, said method comprising introducing a genetic sequence into embryonic stem (ES) cells, which genetic sequence targets the *bcl-w* gene or a transcript thereof ~~or a gene associated with *bcl-w*~~ and introducing said ES cells into blastocysts to produce a chimeric animal.

15. (Currently amended) A method according to claim 14 wherein the genetically modified male non-human animal is a mouse.

16. (Currently amended) A method according to claim 14 or 15 wherein the introduced genetic sequence is an antisense molecule, ~~encoding~~ encodes an antisense molecule or permits excision of the *bcl-w* gene or a region within the *bcl-w* gene.

17. (Currently amended) A method according to claim 16 wherein the introduced genetic sequence is bounded by sites that permit excision of the region between said sites by the action of ~~encodes the~~ a Cre recombinase.

18. (Currently amended) A modified male non-human animal comprising a mutation in a ~~gene corresponding to the *bcl-w* gene~~ or a derivative or homologue thereof ~~or in a gene associated with *bcl-w*~~ wherein an adult male of said animal exhibits the following characteristics:

- (i) is substantially infertile;
- (ii) possesses disorganized seminiferous tubules;
- (iii) exhibits heterogenous degeneration of germ cell types; and

(iv) possesses no other major abnormalities as determined by histological examination.

19. (Cancelled)

20. (Currently amended) A modified male non-human animal or avian species exhibiting reduced levels of a Bcl-w protein having an amino acid sequence ~~substantially~~ as set forth in ~~SEQ ID NO:2 or~~ SEQ ID NO:4 or a Bcl-w protein encoded by a nucleotide sequence substantially set forth in ~~SEQ ID NO:1 or~~ SEQ ID NO:3 or a nucleotide sequence ~~capable of hybridizing~~ that hybridizes to ~~SEQ ID NO:1 or 3 or 5 or 7~~ under low ~~stringency~~ stringency conditions at 42 °C wherein said male non-human animal or avian species has an incapacity or a reduced capacity to ~~induce or facilitate~~ undergo spermatogenesis.